State of Hawaii
Department of Health

Child and Adolescent Mental Health Division

Evaluation System Summary

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CAMHD Evaluation System Summary

Over the past decade, Hawaii's statewide mental health systems improvement has been substantially influenced by evaluation practices and results. The Child and Adolescent Mental Health Division (CAMHD) has an elaborate and well-developed system for evaluating its population, services, fiscal resources, outcomes and system operations. Although there are many ways to describe complex systems, CAMHD finds it convenient to think of its evaluation system in terms of four key domains (i) infrastructure, (ii) information capture, (iii) analysis and reporting, and (iv) knowledge application and decision-making. Each of these domains addresses a variety of content, structures, and processes that collectively promote the use of evidence to improve quality and system-family coordination in decision-making.

Infrastructure

The infrastructure domain addresses the elements of the framework and scaffolding that are necessary to support the effective processing of information. Infrastructure includes facilities and equipment, system design, personnel, and management systems.

Facilities and Equipment

The CAMHD evaluation system is supported by an array of centralized and autonomous information systems. CAMHD maintains a statewide network of personal computers (PCs) throughout the eight family guidance centers (FGCs) and their 19 offices, which are spread among the six major islands of the state. The centralized system is known as the Child and Adolescent Mental Health Management Information System (CAMHMIS) and serves as the cornerstone for electronic information processing. Multiple autonomous special purpose databases are maintained by separate operational units of CAMHD to supplement CAMHMIS services.

The CAMHD data network provides user connectivity statewide via fiber, frame-relay, or 56k dial-up connections. CAMHD supports a PC base of 235 workstations that provide CAMHMIS applications, email, and Internet connectivity. In 2003, CAMHD updated its workstations statewide to provide increased security and infrastructure in support of the Health Insurance Portability and Accountability Act (HIPAA). This upgrade produced a high capacity of distributed computing power to front-end users throughout the system. When autonomous data systems are maintained on PCs, they are generally based in the Microsoft Office environment.

CAMHMIS is an Oracle based solution running within a Microsoft Windows environment that is housed at the CAMHD central office facilities. CAMHMIS is a cluster of multiple Oracle applications supporting core CAMHD operations, purchase of service (POS) functions, data center billing operations, and Medicaid reporting functions. All applications as well as data external to CAMHMIS operations are replicated in real-time to the CAMHD data warehouse. The data warehouse then feeds other operations that have the need for current up-to-date information as well as historical information.

System Design

CAMHMIS was originally designed to manage child registration information, but rapidly expanded to support electronic service authorization and billing to manage financial and service utilization data. Over time, CAMHMIS added new modules to manage additional performance outcomes and clinical information.

The child registration module tracks the registration and discharge history of clients. This module provides a longitudinal record of demographic, psychographic, and interagency involvement information. In addition, a variety of identification numbers (e.g., social security number, student identification numbers, etc.) are recorded to support merging CAMHD data with data systems from other agencies. The service authorization and billing modules log the date, type, amount, and cost of services. The clinical and outcomes modules track a wide variety of information including child status measurements, treatment progress reports, and results of case-based quality reviews.

CAMHMIS supports two primary on-demand reporting systems to deliver information from the data warehouse to end-users via the state intranet. Oracle Discoverer is an on-line analysis and processing (OLAP) tool that distributes data sets in a tabular format to the end-user. End-users can resort and reorganize these reports and easily export the

data to Microsoft Excel, SPSS, or other data processing environments. The clinical reporting module (CRM) was locally designed and constructed in Oracle Developer and Microsoft Excel environments to provide highly organized, user-friendly information in a graphic format. The CRM produces caseload summaries and individual client histories. In addition to these on-demand reporting systems, all CAMHMIS data may be exported manually via ODBC to other analytic environments (e.g., SPSS) for special studies.

Multiple operational units within CAMHD including the administration section (AS), clinical services office (CSO), performance management office (PMO), and the family guidance centers (FGCs) maintain autonomous data systems. These data systems are designed to employ CAMHMIS code sets where possible to facilitate manual data merging among these data systems and CAMHMIS. Although too numerous to detail, examples include PMO systems that manage credentialing, grievances, sentinel events, coordinated service plan quality, and agency quality reviews; CSO systems that track consultation, evidence-based services, special populations (e.g., youth at mainland placements, juvenile sex offenders, etc.) and training activities; and AS systems that administer information on contracts, manual payments, Medicaid enrollment, and personnel. The research and evaluation section also maintains some specialty datasets (e.g., consumer satisfaction surveys), and commonly performs the manual integration of multiple autonomous data sources when needed for special studies.

CAMHD's information system supports a complex hierarchy of user rights and accessibility. For example, FGC branch chiefs can view data statewide whereas care coordinators can only see clients on their caseload at their respective FGC. Access levels control all reports and application systems, and portions of an application can be denied based on the user's role. Network security is provided by departmental firewall and division level equipment that restricts access. Full daily backups are performed and stored off-site. CAMHD has implemented emergency data recovery procedures for the entire CAMHMIS system.

Personnel

Care coordinators have primary responsibility for registering youth with CAMHD, facilitating coordinated service planning, authorizing services, coordinating child services, and administering child status assessments. Some care coordinators are responsible for directly entering data into CAMHMIS and retrieving reports, whereas other FGCs use clerical staff for data entry and report retrieval. To ensure that care coordinators have sufficient time to attend to all aspects of their practice, client caseloads are maintained in the range of 15 to 20 clients per care coordinator.

Each FGC has a Quality Assurance Specialist (QAS) who has the role of reviewing records and participating in quality review activities. The QAS reviews data entry in CAMHMIS and charts to ensure that information is being collected and recorded in a manner that supports high quality services and evaluation. The performance manager oversees the statewide quality assurance and improvement program. The performance manager has extensive background in case based system evaluation, conducting family focus group interviews, and sharing feedback with a broad group of stakeholders. The PMO coordinates annual interagency and CAMHD quality reviews of school complexes, FGCs, and provider agencies. In addition to quality reviews, the PMO administers credentialing, grievances and appeals, sentinel events, and facility licensing activities.

The management information system (MIS) section of CAMHD continues to be managed by the senior applications analyst (SAA) who developed the CAMHMIS system in conjunction with Oracle. The SAA has a thorough understanding of the CAMHMIS system and performs information system design, data integration, and manages application implementation. The SAA also oversees the analysis and reporting produced from the MIS section.

CAMHD employs a full-time doctoral level research and evaluation specialist (RES) with extensive experience in basic and applied research environments. The RES provides a variety of services including information and evaluation system design, analysis and reporting, and interagency liaison. In addition, the RES provides technical assistance, training, and mentoring to personnel through CAMHD to facilitate the understanding and use of evidence to improve decision-making.

Management Systems

The Chief of CAMHD directly supervises the personnel responsible for the four major operational units of the CAMHD evaluation system (i.e., FGCs, MIS, PMO, & RES). Performance responsibility is passed through line supervision to the front-line personnel directly responsible for implementing the evaluation system. Performance of the evaluation system is managed through a series of performance indicators that are gathered throughout the operational sections (e.g., percent of registered youth with CAFAS completed quarterly, percent of monthly development milestones successfully completed by RES). These performance indicators are reported monthly to the Expanded Executive Management Team (EEMT) and reviewed by all section managers.

In addition routine and special evaluation reports are produced and reviewed by appropriate committees in the quality assurance and improvement structure (e.g., the sentinel events report is reviewed by the Safety and Risk Management committee, quality of care study reports are reviewed by the Performance Improvement Steering Committee).

The Information System Design (ISD) committee consists of representatives from all operation units of CAMHD (AS, CSO, FGCs, PMO, MIS, and RES) and is primarily responsible for coordinating developments to the CAMHD information systems. ISD coordinates the entire development process from reviewing and prioritizing new proposals, setting requirements and promoting the specification of key business and clinical processes, monitoring timeliness of application development, and facilitating training and implementation of new information processes following application development. ISD also performs user satisfaction surveys and reviews information that identifies areas needing future development. ISD has its own performance indicators and reports to the Performance Improvement Steering Committee (PISC) and ultimately the Executive Management Team (EMT) as part of the quality assurance and improvement structure.

Confidentiality of information and Records. CAMHD's policies and procedures (P & Ps) related to confidentiality, privacy, and security were reviewed and revised in preparation for the 2003 implementation of HIPAA. Thus, these P & Ps are up-to-date and will govern the performance of this project. These P & Ps require a designated staff member to handle overall security; management and control of records at each site where records are stored; storage of all records behind multiple barriers away from public access when not in use; prohibit leaving unlocked records unattended during working hours; and limit access to records to authorized personnel.

Institutional Review Board (IRB). The Department of Health maintains an active IRB that approves research studies. The DOH IRB maintains a reciprocity agreement with the University of Hawaii IRB for joint projects.

Information Capture

Information capture describes both the content domains that are included in the evaluation system as well as the procedures for actually collecting and coding data. CAMHD roughly organizes its evaluation content into domains of population, fiscal, service, outcome, and system operations. Within each of these domains, many specific variables are defined and collected. Although each variable may be captured by a different procedure, CAMHD roughly organizes its procedures into routine service operations, performance management operations, and quality monitoring operations.

Evaluation Domains

CAMHD gathers information on a variety of characteristics that describe the registered client population. Key demographic variables include gender, ethnicity, date of birth, and geographic service area (by family guidance center, school, complex, and district). Characteristics of interagency involvement include dates of involvement and caseworker identification for the Department of Human Services (DHS), Probation or Parole, Department of Education, and other DOH division (adult mental health, alcohol and drug, developmental disabilities), court hearing dates, incarceration dates, and location of incarceration. CAMHD also records primary, secondary, and tertiary DSM diagnoses. The CAMHD population may be further described by eligibility source (e.g. IDEA, QUEST health plan) and care coordinator managing the case. These population data are recorded longitudinally by change events within the CAMHMIS system.

Fiscal and resource information that are routinely assessed as part of the CAMHD evaluation system include

the cost of services (available by type of service, provider, and youth), total quarterly budgets and expenditures for central office and the FGCs, and revenues by source (e.g., state general funds, Medicaid, other special funding and grants). Additional resources variables that are monitored include care coordinator caseloads, position occupancy and vacancy rates at central office and the FGCs, timeliness of bill processing and payment, and network adequacy (e.g., staffing ratios, bed capacity and occupancy).

Service information is used to evaluate access and availability of services, quality of service planning, under- and over-utilization of services, and use of evidence-based practices (targets and practices). Service information collected from service authorizations and accepted billing records includes the date, type, and amount of services as well as the agency providing the service, the identification and credentials of the service provider and the service supervisor. CAMHD also records the timeliness and quality of coordinated service planning, and requests for and satisfaction with consultation support from the CAMHD practice development and resource management specialists. Providers supply additional information on referral and service patterns (e.g., number of referrals reviewed within 48 hours, number of youth accepted upon referral, number of youth served within 5 days of referral, number of youth ejected from the program). Monthly treatment summaries trace the specific treatment targets (48 predefined plus free text) and therapeutic practices (55 predefined plus free text) that are provided to children and families. CAMHD monitors several specific performance measures that describe key operating characteristics including service gaps (no service received within 30 days), service mismatches (specific services matching plan not received within 30 days), out-of-state placement rates, and out-of-home placement rates.

Although outcomes may vary from context to context, CAMHD gathers a variety of results-based measures. To monitor child status, CAMHD uses several standardized instruments. The Achenbach System of Empirically Based Assessment (ASEBA; Achenbach & Rescorla, 2001) Child Behavior Checklist (CBCL), Teacher Report Form (TRF), and Youth Self-Report (YSR) as used assess symptoms and syndromes experienced by youth. Functional status is measured through the use of the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1998). The Child and Adolescent Level of Care Utilization System (CALOCUS American Academy of Child and Adolescent Psychiatry, 1999) indexes a variety of risk factors and supports that lead to recommendations about the intensity and restrictive of needed services. Monthly treatment progress reports summarizing clinical progress ratings for each treatment target, school attendance, and arrests during the month. CAMHD also maintains a system for recording sentinel events (i.e., critical incidents) that code for over 70 child (e.g., assault, substance use) and institutional events (e.g., medication error, staff injury). A host of additional child status and system outcomes are evaluated through annual case-based quality reviews. Child status dimensions include learning progress, stability, safety, physical and emotional well-being, caregiver functioning, whereas system functioning dimensions include understanding of the child, long-term view, integrated service plans, service array, implementation, caregiver supports, successful transitions, monitoring, and effective results. To measure consumer satisfaction, CAMHD purchases survey services from an external vendor. CAMHD has used the CMHS family and youth satisfaction questionnaires, but due to requirements from our state Medicaid agency, CAMHD will begin using the Experience of Care and Health Outcomes (ECHO) survey with the NCQA administration protocol in 2004.

The final content domain routinely evaluated by CAMHD is that of system operations. CAMHD has defined and gathers a wide variety of performance measures to promote smooth and efficient system functioning and to promote early identification of bottlenecks or obstacles in the system. Every operating section and committee in CAMHD has performance measures that are gathered and reported on a monthly or quarterly basis. Although too numerous to list here, in addition to those described above, major classes of information collected involve credentialing (timeliness of credentialing, error rates for MIS transactions), evidence-based services (number of articles reviewed, timeliness of practice updates, dissemination of practice updates), family guidance centers (average caseload, within budget, service plan timeliness and quality, service gaps and mismatches, in-home services, acceptable quality reviews, child status improvements, family satisfaction), grievances and appeals (timely investigation, rate of overturn upon appeal), licensing (timely auditing, site visits, and corrective action plans), policies and procedures (timely review and revision of P & Ps), practice development (percent of staff trained in core areas, training quality ratings, satisfaction with consultation, successful case closing), and provider relations (timely query resolution, provider satisfaction). An effort is made to select performance indicators that reflect both the timeliness and quality of work produced and that are associated with key initiatives or critical steps in business/clinical processes.

Evaluation Procedures

Information gathering as part of routine clinical service operations may be roughly divided into event-based activities and scheduled activities. Event-based activities refer to information gathering episodes that coincide with key business and clinical events. Examples of event-based activities are registrations and discharges from the system, authorization and billing for services based on clinical service decisions, court hearing dates, and updates to geographic location based on child and family mobility. Scheduled activities are planned activities that occur on specific occasions throughout the year. Scheduled activities include monthly completion of treatment progress summaries, quarterly administration of the ASEBA, CAFAS, CALOCUS, and record reviews, and annual diagnostic evaluations.

In the CAMHD system, care coordinators are primarily responsible for performance of event-based information gathering. Care coordinators are the primary point of contact with the family and the primary liaison with planning teams and service providers for registering youth, identifying needed services, procuring services, maintaining clinical records, and minding service provision. Care coordinators are also responsible for many scheduled activities such as quarterly administration of the child status measures (ASEBA, CAFAS, and CALOCUS), quarterly coordinated service plan updates, and monthly review of service summaries with families. Providers are responsible for monthly completion of the treatment progress summary which summarize treatment setting, treatment targets, clinical progress ratings, practice elements, school attendance, and arrests, and may include child status measures when available (ASEBA, CAFAS, CALOCUS). Annual diagnostic evaluations are procured through the Department of Education, through the provider network, or may be performed by CAMHD psychologists or psychiatrists at the family guidance centers. Care coordinators are responsible for gathering information from these assessments.

Beyond information gathered as part of the routine clinical service process, CAMHD administers procedures for gathering detailed information for performance management and quality improvement. The performance management system includes family guidance center branches, CAMHD operating sections, quality committees, and providers. As previously noted, all aspects of the CAMHD system have defined performance measures that are gathered monthly or quarterly and are reported through the report interpretation structures described below. The methodologies for each of these performance measures differ and are too extensive to detail here. Generally, data for these measures are generated through CAMHMIS or produced through autonomous data systems maintained by operational sections. For example, quality assurance specialists at the FGCs randomly select a sample of records on a quarterly basis and review coordinated services plan quality using an 11 item rating instrument to assess stakeholder involvement, understanding of child needs, evidence-based service, inclusion of informal supports, transition and crisis planning, etc.).

A number of quality assurance activities and performance measures are delegated to provider agencies as part of their contracts. Providers are required to submit quarterly reports summarizing performance measures that include the number of referrals reviewed within 48 hours, number of youth accepted upon referral, number of youth served within 5 days of referral, number of youth ejected from the program, the number of staff that are fully credentialed, average length of treatment, and number of youth who have met treatment goals. CAMHD provides guidance on the definition of these indicators and validates these measures with quality reviews, but specific procedures for gathering data are defined by each provider agency.

Quality monitoring reviews that include both case-based reviews and administrative reviews are conducted annually with provider agencies, family guidance centers, and school complexes. Human Systems and Outcomes of Tallahassee, FL developed the case-based review methodology used to evaluate child status and system performance. A random sample of youth receiving services during the year is selected for review. Trained reviewers conduct extensive record reviews, observations, and interviews with anyone who was involved with the child (e.g., parents, teachers, probation officers, child welfare workers, therapists, etc.). Reviewers rate cases on a variety of child status dimensions including learning progress, stability, safety, physical and emotional well-being, caregiver functioning. Reviewers also rate the adequacy of system functioning along the dimensions of understanding of the child, long-term view, integrated service plans, service array, implementation, caregiver supports, successful transitions, monitoring, and effective results.

In conjunction with case-based reviews, additional administrative reviews are performed to monitor delegated credentialing and quality assurance activities, support facility licensing, grievance processes, staffing ratios, policies

and procedures, sentinel events and safety management, utilization review mechanism, fiscal performance, and overall adherence with practice guidelines and performance standards. Following completion of reviews, debriefing sessions are conducted to present the results of reviews. In addition, data are aggregated over the course of the year to identify system-wide patterns and trends.

Analysis and Reporting

Analysis and reporting describes both report production mechanisms and report interpretation structures. In this context, a report may include anything from a single piece of data or "sound bite" to a more traditional narrative description with embedded tables and figures. CAMHD's report production and delivery mechanisms include on-demand feedback, routine management reporting, and special study reporting. CAMHD maintains an elaborate system for reviewing and interpreting reports. This includes both interagency and internal quality assurance and improvement meetings, provider network meetings, community performance presentations, and "public" distribution of written reports to stakeholders.

Report Production Mechanisms

CAMHMIS supports two primary on-demand reporting systems to deliver information to clinical and administrative staff via the state intranet. These two solutions, Oracle Discoverer and the CAMHMIS Clinical Report Module (CRM), address very different reporting needs. Discoverer provides a wide variety of reports addressing specific issues (e.g., unduplicated client counts by FGC, youth without service authorizations) with the supporting data for further exploration by analysts. The CRM provides a few specific reports that display a breadth of information in a compact fashion designed to be immediately interpretable by clinicians and supervisors.

Discoverer distributes special purpose data sets in a tabular format that allow decision-makers to resort, reorganize, and reanalyze these data in many ways. Although Discoverer does not require user's to understand or produce database queries, it still requires significant knowledge for how to sort, analyze, and interpret the resultant data. Over 200 different Discoverer reports have been defined to answer specific questions and allow decision-makers to "drill-down" into the information. Collectively, the Discoverer reports cover almost all of the evaluation domains including population, fiscal, services, and outcomes.

The clinical reporting module (CRM) was designed to provide highly organized, user-friendly information in a graphic format. The CRM was designed to provide easily understood, clinically relevant information to front-line staff with little data savvy and computer skills. The CRM produces caseload summaries and individual client histories that include all available information on child status measurements (ASEBA, CAFAS, CALOCUS), service history (authorizations and accepted billing records), diagnosis, interagency involvement (including court hearings and incarceration), treatment targets, treatment practices, clinical progress ratings, school attendance, and arrest histories. Thus, the CRM presents a breadth of information in a compact format. The CRM uses only two different presentation formats for caseload summaries and two for individual history summaries. Statewide training on interpreting these reports indicated that an average of 85% accuracy in answering 10 common clinical and administrative questions was achieved following a single two-hour training session.

In addition to these two centralized on-demand feedback tool, many autonomous special purpose tools have been developed to provide immediate feedback to CAMHD staff. These tools are generally Microsoft Excel workbooks that include worksheets for data management, preprogrammed analysis, and presentation. These tools require users to enter specific data relevant to the topic of interest and to print the presentation sheet. Intervening analysis and presentation design are preprogrammed and automated by research and evaluation experts. For example, a feedback tool was created for QASs to log the results from their quarterly coordinated service plan review checklists. The feedback tool automatically analyzes and presents the quality trend summaries and item details and can be printed separately for an entire FGC, by subunit (e.g., office or school), or by care coordinator. This file is submitted quarterly to the PMO and the data is included in a statewide summary and presentation tool. This mechanism is used for almost all performance measures that are not included in the CAMHMIS system.

Beyond these automated, on-demand reporting systems, CAMHD sections produce a routine set of management reports. These reports are often more traditional in format and include narrative analysis in addition to tables and

figures. These management reports are organized around a core set of data elements and analysis with periodic additional custom analyses to investigate key questions or concerns in greater depth. Examples of management reports include an annual performance variance report and evaluation reports, quarterly statewide performance indicators (a.k.a., Sustainability Report), grievance and appeals, sentinel events, and utilization management reports, and monthly caseload size, and service gaps and mismatches reports.

Finally, CAMHD produces highly customized, in-depth analytic reports on special topics. The RES and/or special purpose workgroups generally produced these reports and they resemble typically published research and evaluation studies. These reports include clinical and nonclinical quality of care improvement studies as specified in the annual quality assurance and improvement program workplan, as well as investigator- or management-initiated research or evaluation reports. Examples of reports produced in the past year include the Child Status Measurement Improvement Study and the MED-QUEST Population Study.

Report Interpretation Structures

A statewide interagency quality assurance system exists to provide a mechanism for communicating and responding to evaluation results. Peer review meetings are held regularly at each school to review cases and identify youth that would benefit from extra services or supports. Local school complexes assemble interagency quality assurance team that review evaluation information and create action plans to address identified opportunities. When issues are identify that extend beyond the complex area, information is passed to district-level quality assurance teams for their review and planning. A state-level interagency quality assurance team also meets regularly to review relevant data and develop plans for improving system quality.

Along with participating in the interagency quality assurance structure, CAMHD maintains a committee-based internal quality assurance and improvement structure in addition to its operational and line supervision structure. The executive management team (EMT) is CAMHD's governing body and sits at the apex of the internal quality structure. One level below EMT are the performance improvement steering committee (PISC), expanded executive management team (EEMT), and network meetings. Performance measures for each of CAMHD's quality committees (i.e., compliance, evidence-based services, grievance and appeals, information system design, policy and procedure, safety and risk management, training, utilization management) are reviewed by PISC; performance measures for the operational sections are reviewed by EEMT; and performance measures for the family guidance centers (FGCs) are reviewed by network meeting. Each of these committees will also review relevant evaluation and management reports and pass their recommendations up the committee structure to EMT. Provider and family representatives participate throughout CAMHD's quality structure.

Several other organizational structures are used to interpret and communicate evaluation results to CAMHD's broad stakeholder groups. Quarterly meetings are held with CAMHD's network of provider agencies to review and address a wide variety issues, including evaluation-related information. On a semi-annual basis, FGC branch chiefs prepare and present evaluation results to their local communities via public performance presentations. Attendance at these presentations ranges from family members, providers, nonprofit and state child serving agencies, to judges, senators, and representatives. Finally, CAMHD distributes written reports to stakeholder distribution lists and publicly via the Internet.

Knowledge Application and Decision-Making

The CAMHD evaluation system is designed to gain knowledge that enhances clinical and administrative decision-making to improve the lives of Hawaii's residents. CAMHD is continually exploring new ways for using knowledge that is uncovered. However, core domains that repeatedly emerge in which knowledge may improve decision-making are service planning and clinical care, staff supervision and mentoring, technical assistance and training, service network and resource development, policy development, and external stakeholder communication.

Service planning and clinical care involve an extremely diverse and often poorly specified decision-making space. The development of practice guidelines and evidence-based services reviews are a good example of efforts to clarify decision-making in this domain. Local historical evidence on CAMHD clients gathered by the evaluation system (e.g., child status, service history, and treatment practices) play a key role in educating these decisions in the absence of guidance from the empirical research literature.

The CAMHD evaluation system has helped to identify areas of need, generate content for, and monitor implementation of practice development initiatives. Key mechanisms for practice development include supervision practices, mentoring, technical assistance, and training. For example, implementing performance measures regarding the percent of staff trained in core knowledge areas highlights needed training in the field. Examination of reasons for seeking consultation helps identify content areas for curriculum development. Dissemination of the clinical report module was joined with a supervision initiative focusing on identifying youth in need of updated assessments, cases with poor or unchanging child status, and child needs that may not match with current level of service restrictiveness.

Evaluation-based knowledge has advanced service network and resource development by mapping decision processes for reviewing bed capacity, occupancy, and waitlists when considering provider contract renewal. Analysis of services by geographic location has supported decisions about service resource allocations across the state. Policy decisions have also been educated by service data analysis. For example, regular review of utilization by level of care identified a consistent reliance on the use of hospital-based residential care that was disproportionate to the remainder of the service array. This observation led to the development and implementation of a policy for state level preauthorization review by the CAMHD clinical and medical director prior to placement in hospital based residential care. Implementation of this policy coincided with increased use of less restrictive service settings.

Better communication with all of its stakeholders remains an ongoing goal of CAMHD. The annual evaluation report, quarterly sustainability report, and periodic performance newsletter have all increased the knowledge of stakeholders about the CAMHD system. In addition to increasing the visibility of the CAMHD system, evaluation data and analysis has provided answers to some common stakeholder questions. The semiannual performance presentations by FGC branch chief have generated lively discussion about key performance issues and interagency interactions.

CAMHD is continually looking for new ways to promote the application of evaluation knowledge to improve our system. CAMHD has found flow-charting to be a very useful tool for promoting knowledge application. Three types of flow charts are produced to facilitate system development. Decision flow charts are cognitive models of the series of decisions that “domain experts” make in determining a course of action. At each decision point, specific reports are identified that contain information relevant to making the decision and where possible, decision criteria are enumerated. Business or clinical process flow charts describe the series of activities and exchanges that are performed by various operational units to execute tasks. Data flow charts illustrate the information-processing pathways through which bits of information traverse the information system to reach key stakeholders and decision-makers. Finding missing elements, redundancies, or bottlenecks in these charts often help identify opportunities for system development. For example, decision points with no reports or criteria specified describe opportunities for grooming evidence to educate the decision. Business processes the bottleneck provide excellent candidates for selecting performance measures or for reengineering the system. Information systems “dead-ends” identify avenues for increasing the benefits realized from current information without adding new information gathering costs.

Following identification of opportunities for organizational development, recommendations are generated and corrective action plans are commonly developed to put the knowledge to practical work. Milestones, benchmarks, or relevant performance measures are included in the corrective action plans to monitor implementation.

References

Achenbach, T. M., & Rescorla, L. A. (2001). Manual for the ASEBA school-age forms and profiles. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.

American Academy of Child and Adolescent Psychiatry & American Association of Community Psychiatrists (1999). Child and Adolescent Level of Care Utilization System: User's Manual. Author.

Hodges, K. (1998). Child and Adolescent Functional Assessment Scale (CAFAS). Ann Arbor, MI: Functional Assessment Systems.